

CLAIMS

1. An electrical connector semiconductor package comprising:

5 one or more substrate comprising one or more semiconductor devices attached to the substrate and a first plurality of electrically conductive signal paths provided on at least a first surface of the substrate;

10 a semiconductor package, wherein the semiconductor package comprises a first package face comprising a first set of connector terminations and a second package face comprising a second set of connector terminations, wherein one or more of the first set of connector terminations are provided to couple a set of external signals to the one or more semiconductor devices via one or more of the plurality of signal paths on the substrates, and the one or more semiconductor devices are also coupled to the one or more of the
15 second set of connector terminations via one or more of the plurality signal paths on the substrate; and

20 one or more fly-over electrically conductive signal paths, wherein at least one of the fly-over signal paths is coupled from one of the first set of connector terminations to one of the second set of connection terminations while bypassing a direct connection with the substrate; wherein the semiconductor package hermetically seals the substrate and one or more fly-over signal paths

- 25 2. The electrical connector semiconductor package of Claim 1 wherein at least one of the fly-over signal paths comprises a dip portion in that signal path, wherein the dip makes a direct electrical contact with one of the signal paths on the substrate to electrically connect to one or more the semiconductor devices on the substrate, while a first and second portion of the fly-over signal path on either side of the dip portion comprise a curve portion providing a clearance from the substrate.

3. The electrical connector semiconductor package of Claim 1 wherein the first set of connector terminations comprises a set of connector pins, connector blades, electrically conductive bumps, electrically conductive pads, or electrically conductive receptacles.

5 4. The electrical connector semiconductor package of Claim 1 wherein the second set of connector terminations comprises a set of connector pins, connector blades, electrically conductive bumps, electrically conductive pads, or electrically conductive receptacles.

10 5. The electrical connector semiconductor package of Claim 1 wherein the first set of connector terminations comprises a set of male connector terminations.

6. The electrical connector semiconductor package of Claim 1 wherein the second set of connector terminations comprises a set of female connector terminations.

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